REMARKS

Claims 3-23 are pending in this application. By this Amendment, claims 3-4, 7, and 15-16 are amended, and claims 21-23 are added. Support for the amendments can be found in, for example, original claims 15-16, and 19. No new matter is added. Applicants appreciate the Examiner's allowance of claims 11-14, and withdrawal of the Restriction Requirement. Reconsideration of the application based upon the above amendments and the following remarks is respectfully requested.

I. Rejection Under 35 U.S.C. § 112

a. First Paragraph

The Office Action rejects claim 7 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. By this Amendment, claim 7 is amended in light of the Examiner's comments. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

b. Second paragraph

The Office Action rejects claims 3-10 and 15-20 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. By this Amendment, claims 3 and 4 are amended in light of the Examiner's comments. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

II. Rejections Under 35 U.S.C. § 102(b) or 35 U.S.C. §103

a. Choi

The Office Action rejects claims 3-6, 8-10, and 18 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Choi et al. ("Choi" J. Opt. Soc. Am. B/Vol. 17, No. 9/September 2000). However, Choi does not

disclose, teach, or suggest every limitation of independent claim 3. Thus, the rejection is respectfully traversed.

As asserted by the Office Action, on page 4, Choi discloses that the target is made by gluing a powder of Sn oxides onto a tape and compressing it by hand (Choi, page 1617, col. 2). However, nowhere does Choi disclose, teach or suggest using a gel to produce a target, as claimed. Choi further fails to disclose, teach or likewise suggest that the target has a lower density than the density of a crystal or even that it is preferable for target to have a lower density, as claimed. Choi thus fails to disclose, teach or likewise suggest an extreme ultraviolet light source target, as claimed. Accordingly, Choi fails to anticipate and likewise would not have rendered obvious the claimed invention.

Claims 4-6, 8-10, and 18 variously depend from independent claim 3. Because Choi fails to disclose, teach or suggest, the features recited in independent claim 3, dependent claims 4-6, 8-10, and 18 are patentable for at least the reasons that claim 3 is patentable, as well as for the additional features they recite.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

b. Koplick

The Office Action rejects claims 3-5, 15, and 17 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Koplick et al. ("Koplick" U.S. 6,355,821). However, Koplick does not disclose, teach, or suggest every limitation of independent claims 3 and 15. Thus, the rejection is respectfully traversed.

At most, Koplick discloses a method of making a heavy-metal oxide layer comprising manufacturing a gel containing a heavy-metal oxide (Koplick, col. 7, lines 21-24). However, nowhere does Koplick disclose, teach or suggest that the density of the heavy-metal oxide of a target is made to be 0.5% to 80% of the density of a heavy-metal oxide crystal.

In addition, absent having the knowledge provided by the present disclosure that it is preferable for a target to have a lower density than the density of its crystal, a person skilled in the art would not have tried using a gel to form a target for producing an extreme ultraviolet light. This is because it was accepted knowledge in the art that a target having a higher density would generally produce a more intense light. However, Applicants have determined that it is preferable for the laser absorption region and the extreme ultraviolet light emission region to overlap in space. The Applicants have also found that by adjusting the density of the target, they could make the two regions overlap. Based upon these findings, Applicants concluded, unexpectedly, that the preferable density of the heavy metal or the heavy-metal compound is 0.5% to 80% of the density of a crystal of the heavy metal or the heavy-metal compound, as claimed.

Absent these findings, a person having ordinary skill in the art would not have used the heavy metal oxide layer of Koplick as an extreme ultraviolet light source target, as claimed. Accordingly, Koplick fails to anticipate and, likewise, would not have rendered obvious the claimed invention.

Claims 4-5 and 17 variously depend from independent claims 3 and 15. Because Koplick fails to disclose, teach or suggest, the features recited in independent claims 3 and 15, dependent claims 4-5 and 17 are patentable for at least the reasons that claims 3 and 15 are patentable, as well as for the additional features they recite.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

c. Tillotson

The Office Action rejects claims 3 and 19 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Tillotson et al.

("Tillotson" U.S. 5,409,683). However, Tillotson does not disclose, teach, or suggest every limitation of independent claim 3. Thus, the rejection is respectfully traversed.

At most, Tillotson discloses a method of producing a metal oxide aerogel from a gel containing a metal oxide (Tillotson, col. 2, lines 13-17). However, nowhere does Tillotson disclose, teach or suggest that a density of a heavy metal or a heavy-metal compound is 0.5% to 80% of the density of a crystal of the heavy metal or the heavy-metal compound, as claimed.

In addition, as discussed above, absent having the knowledge of the present disclosure that it is preferable for a target to have a lower density than the density of its crystal, a person skilled in the art would not have tried using a gel to form a target for producing an extreme ultraviolet light. Thus, at the time of the invention, a person having ordinary skill in the art would not have used the heavy metal oxide layer of Tillotson as an extreme ultraviolet light source target, as claimed. Accordingly, Tillotson fails to anticipate and, likewise, would not have rendered obvious the claimed invention.

Claim 19 depends from independent claims 3. Because Tillotson fails to disclose, teach or suggest, the features recited in independent claim 3, dependent claim 19 is patentable for at least the reasons that claim 3 is patentable, as well as for the additional features it recites.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

III. Rejection Under 35 U.S.C. §103

The Office Action rejects claims 16 and 20 under 35 U.S.C. §103(a) as being obvious over Koplick in view of Hornberger et al. ("Hornberger" U.S. 4,917,960). Applicants respectfully traverse the rejection.

The above arguments related to Koplick are incorporated herein by reference. As discussed above, nowhere does Koplick disclose, teach or suggest that the density of the heavy-metal oxide of a target is made to be 0.5% to 80% of the density of a heavy-metal oxide crystal. As also discussed, absent having the knowledge of the present disclosure that it is preferable for a target to have a lower density than the density of its crystal, a person skilled in the art would not have tried using a gel to form a target for producing an extreme ultraviolet light. Thus, a person having ordinary skill in the art would not have used the heavy metal oxide layer of Koplick as an extreme ultraviolet light source target, as claimed.

Hornberger does not overcome the deficiencies of Koplick. At most, Hornberger discloses creating a pore in a coating by inserting a fugitive material into a binder and then removing the fugitive material (Hornberger, col. 4, line 64 to col. 5, line 6). However, nowhere does Hornberger teach or suggest inserting a fugitive material into a heavy metal oxide gel to decrease the density of a heavy metal oxide target as claimed. Hornberger further fails to teach or suggest that the density of the heavy-metal oxide of a target is made to be 0.5% to 80% of the density of a heavy-metal oxide crystal, as claimed.

Thus, at the time of the invention, the combination of Koplick and Hornberger would not have rendered obvious independent claim 16. In addition, neither reference provides any reason or rationale for one of ordinary skill in the art to have modified the disclosed methods in order to practice the claimed invention.

Claim 20 depends from independent claim 16. Because Koplick and Hornberger fail to teach or suggest, alone or in combination, the features recited in independent claim 16, dependent claim 20 is patentable for at least the reasons that claim 16 is patentable, as well as for the additional features it recites.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

IV. New Claims

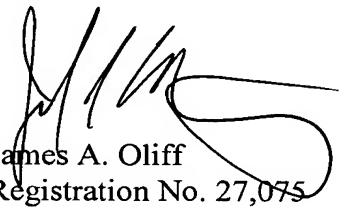
By this Amendment, new claims 21-23 are presented. New claims 21-23 variously depend from claim 7 and, thus, distinguish over the applied references for at least the reasons discussed above with respect to claim 7. Prompt examination and allowance of new claims 21-23 are respectfully requested.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of this application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:
Amendment Transmittal
Petition for Extension of Time

Date: September 22, 2008

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